

Wowsernomics

Read aloud the silly bits
from economic theory

Cricks Lecture
Steve Keen

- Why "Wowsernomics?"
 - Wowser: great Aussie word
 - "obnoxiously puritanical"
 - prude **and** pervert
 - » Simultaneously horrified & titillated by sensuality
 - Australian "larrikin" tradition to not take the earnest seriously
 - » Fred Nile vs Rush Limbaugh
 - Best satire Reg Livermore, "Festival of Light" from Betty Blockbuster Follies:
 - "Now you can start this Friday night
 - Invite your friends to the Festival of Light
 - Pull across the drapes and show
 - the coloured slides that have to go!
 - Home made movies, letters, books,
 - Give your porno one last look
 - And before the bonfire's finally lit,
 - ***READ ALOUD THE DIRTY BITS!***
 - Apply that larrikin spirit to economics...
- Economics: Appearance of science
 - Equations, models, statistics...
 - But really, a meld of worst of science & religion
 - Sciences: empirical foundation
 - Many dilemmas, but ultimately "data wins"
 - More like religion with a twist
 - Religion:
 - read God's Word
 - Interpret the Prophets

- Economics: worst of both worlds
 - Scientism in presentation
 - Heavy apparent reliance on data, maths
 - » But fundamental ignorance of empirical reality
 - Caveat: Great difficulty in empirically testing theory
 - » No controlled experiments
 - Religion in practice
 - But sloppy reading of "great texts"
 - Mendacious textbooks
 - » Madness dressed up as sanity
- Maintained by wonky Religious hierarchy
 - Heretics outside
 - Attacked by believers (doorknocked)
 - Believers inside
 - Some worries, but trust priest know better
 - Priests
 - Try to make the Bishops look good
 - Write catechisms
 - "Beautify" unsavoury writings of Bishops
 - Bishops
 - Accidentally proven God doesn't exist
 - Some lapse (Sonnenschein)
 - Others continue to assume God exists, even though proven doesn't
- Only way to unravel the Walras Code
 - Read the Invisible Hand Scrolls yourself...
 - Bring on Wowsernomics!

- First, the Holy Trinity of Economics
 - The invisible hand
 - Walras Auctioneer
 - Marshall's scissors...
- Economics "Holy Quest"
 - Find the Invisible Hand
 - Prove market maximises welfare
 - Get rid of Walras' Auctioneer
 - Dispense with fiction, show market has same result
 - Oil Marshall's Scissors
 - Enforce competition everywhere
- Adam Smith's "Invisible Hand"
 - Economists cite "Invisible Hand" as if about market efficiency
 - Was instead about local vs overseas production
 - Smith dismisses 18th century worries that "free trade" would lead to relocation of production...
 - "upon equal or nearly equal profits, every wholesale merchant naturally prefers the home trade to the foreign trade...
 - "By preferring the support of domestic to that of foreign industry, he intends only his own ... gain,
 - and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention."
 - (Smith 1776)
- Set vision: market as maker of equilibrium
 - Economists: in search of the Invisible Hand

- Leon Walras, Elements of Pure Economics
 - Mathematics as the route to the Invisible Hand:
 - "As for those economists who do not know any mathematics,...
 - and yet have taken the stand that mathematics cannot possibly serve to elucidate economic principles,
 - let them go their way repeating that
 - "human liberty will never allow itself to be cast into equations" ...
 - and other equally forceful and flowery phrases.
 - They can never prevent [economics] ... from becoming a mathematical theory.
 - Hence, they will always ... [tackle] the problems ... without the necessary equipment,
 - thus producing not only very bad pure economics but also very bad mathematics."
 - (Walras 1900 [1954]: 47)
- Good start! Confidence understandable
 - But then the model:
 - How to reach equilibrium in all markets?
 - Imagine "no trades until equilibrium"
 - "[Walrasian] auctioneer cries out prices"
 - Higggle prices; cry out new set...
 - $D > S$ bananas, increase price bananas
 - $S < D$ beans, decrease price beans
 - Tatonnement: Translation "groping"
 - Once equilibrium in all markets, allow trade...
 - But:
 - Will tatonnement lead to equilibrium?

- Couldn't prove it...
 - "*It will appear probable* that... the new system of prices ... is closer to equilibrium than the old system of prices ...
 - and it is only necessary to continue this process along the same lines for the system to move closer and closer to equilibrium.
 - (Walras 1900 [1954]: 172)
- If could be proved
 - Simple process
 - Extend to real world...
 - Approaches Poincare for backing...
 - Poincare refuses to endorse Walras' conjecture...
- 30 years later
 - Inconvenient mathematical fact:
 - Perron-Frobenius theorem...
 - Can't get Walras' vision
 - Equilibrium unstable
 - » So the madness begins...
 - Assume "whatever it takes" to get equilibrium...

- "From static analysis, it is known that, even under very plausible circumstances, [Walrasian tatonnement] systems ... have multiple equilibria...
- Hence it is not to be expected that every equilibrium point of a Walrasian tatonnement process will be stable."
- "it is natural to conclude that the possible absence of global stability calls for ...
- *[abandoning the quest for equilibrium?]*
- No...
 - *"replacing the Walrasian tatonnement by another dynamic process... !!!"*
- Walras' auctioneer has to know
 - Current prices
 - Supply - Demand in all markets
- Modern economists
 - Auctioneer has to know not just that, but
 - "he needs to know ... how the j^{th} commodity affects the rate of change of the demand for the k^{th} commodity for all j and k ."
 - (Saari & Simon 1978)

- Clearly the informational burden of this system is greater than that of [Walras]", but ...
- one must, in general, be prepared to require a bigger message space **when stability is demanded.**
 - (Hurwicz 1986: 46-47)
- Realist take:
 - "For practical problems, this is a staggering amount of information...
 - our results show that the informational requirement cannot be relaxed by any significant amount."
 - (Saari & Simon 1978)
- Can't replace "auctioneer" with "invisible hand"
- Real prices must be out of equilibrium...
- But only heretics work there...

- Simple concepts: supply & demand...
- Totem of the Econ:
 - Intersecting lines; just relabel the axes
 - Q&P
 - Supply and Demand
 - L and P
 - Employment & Inflation
 - Y and r
 - Output and interest rates
- Foundation idea: supply & demand
 - Textbooks derive demand curve from individual preferences
 - Indifference curves, budget line, hey presto, downward sloping demand curve
 - "Wave hands" to go from single consumer to market
- The Bishops have found...
 - Not that easy! Mad Bishop Gorman:
 - "if, and only if, the Engel curves for different individuals at the same prices are parallel straight lines..."
 - Huh?
 - The necessary and sufficient condition quoted above is intuitively reasonable. It says, in effect, that an extra unit of purchasing power should be spent in the same way no matter to whom it is given."
 - (Gorman 1956)

- Neoclassicals dismiss class analysis
 - Gorman
 - "the conditions ... are not unduly unrealistic...
 - if we are not intending to analyse ... redistribution of income...
 - even where a community indifference map for an entire nation may be thought to be unrealistic,
 - "One simplification which our assumption would not justify would be the neglect of changes in the distribution of income.
 - If however these can be "righted" by lump-sum grants and taxes,... this need not discourage us..."
 - Maybe class analysis?
 - individual class indifference maps may be used to analyse economic relationships between classes."
 - vs Kirman
 - "If we are to progress further we may well be forced to theorise in terms of groups who have collectively coherent behaviour."
- Classes do matter; income distribution does matter

- Sane lapsed Bishops Sonnenschein, Shafer:
 - ... market demand functions need not satisfy *in any way* the classical restrictions which characterize consumer demand functions...
 - The importance of the above results is clear: strong restrictions are needed in order to justify the hypothesis that a market demand function has the characteristics of a consumer demand function.
 - Only in special cases can an economy be expected to act as an 'idealized consumer'.
 - *The utility hypothesis tells us nothing about market demand unless it is augmented by additional requirements.'*
 - (Shafer & Sonnenschein 1982: 671-2 [emphasis added])
- Mad priest Varian
 - "it is sometimes convenient to think of the aggregate demand as the demand of some 'representative consumer'...
 - The conditions under which this can be done are rather stringent, but a discussion of this issue is beyond the scope of this book..."
 - (Varian 1987: 268)
 - 2nd Edition: "This demand function can in fact be *rationalized* by a representative consumer..."
 - 3rd edition: "This demand function can in fact be *generated* by a representative consumer..."

- Labour & Macroeconomics
- "Natural rate" of unemployment
 - Phillips Curve "trade-off"
 - Friedman neutralises with "adaptive expectations"
 - Model: helicopter money!
 - "Let us suppose now that one day a helicopter flies over this community and drops an additional \$1,000 in bills from the sky, which is, of course, hastily collected by members of the community."
 - "the dropping of money, instead of being a unique, miraculous event, becomes a continuous process, which, perhaps after a lag, *becomes fully anticipated by everyone.*"
 - Money rains down from heaven at a rate which produces a steady increase in the quantity of money, let us say, of 10 per cent per year..." (8)
- Problem: still short-term trade-off

- Lucas "Rational Expectations"
 - Inflation "promises unlimited real output gains from a well-chosen inflationary policy." (53)
 - "inflation will yield higher real output on average only if price expectations fall below actual prices on average..."
 - *If the impossibility of a [expected prices differing from actual prices] is taken as an essential feature of the natural rate theory, one is led simply to*
 - *adding the assumption that [expected prices equal actual prices] is zero as an additional axiom...*
 - *... or to assume that expectations are rational..."*
- Not "rational" but "prophetic" expectations
 - Keynes
 - "I accuse the classical economic theory of being itself one of these pretty, polite techniques which tries to deal with the present by abstracting from the fact that we know very little about the future." (1937)
 - Keen
 - "I accuse the classical economic theory of being itself one of these pretty, polite techniques which tries to deal with the present by *pretending that we can predict the future.*"

- For a producer ... a production plan (*made now for the whole future*) is a specification of the quantities of all his inputs and all his outputs ...
 - *The certainty assumption implies that he knows now what input-output combinations will be possible in the future*
 - (although he may not know the details of technical processes which will make them possible)...
 - (Debreu 1959)
- "The analysis is extended ... to the case [of] uncertain events...
 - A contract for the transfer of a commodity now specifies... an event on the occurrence of which the transfer is conditional.
 - *This new definition of a commodity allows one to obtain a theory of uncertainty*
 - *free from any probability concept and*
 - *formally identical with the theory of certainty developed in the preceding chapters."*
 - (Debreu 1959)

- A Bishop defects...
 - "For Walras, general equilibrium theory was an abstract but nevertheless realistic description of the functioning of a capitalist economy.
 - He was therefore more concerned to show that markets will clear automatically via price adjustments ...
 - than to prove that a unique set of prices and quantities is capable of clearing all markets simultaneously.
 - By the time we got to Arrow and Debreu, however, general equilibrium theory had ceased to make any descriptive claim about actual economic systems...
 - It had become a perfect example of what Ronald Coase has called "blackboard economics",
 - a model that can be written down on blackboards using economic terms like "prices", "quantities", "factors of production", and so on, but that nevertheless
 - *is clearly and even scandalously unrepresentative of any recognizable economic system.*
 - » (Blaug 1998)
- How did we get from there to here?
 - Bad religion: not reading the "sacred texts" carefully...

- Solow: what went wrong?
 - "More than forty years ago, I ... worked out ... neoclassical growth theory...
 - [I]t was clear from the beginning what I thought it did not apply to, namely ... the business cycle...
 - now if you pick up an article today with the words 'business cycle' in the title, ... the underlying model will be ... the neoclassical growth model.
 - The question I want to circle around is: how did that happen?"
 - (Solow 2004)
 - "For a while the dominant framework for thinking about the short run was roughly Keynesian'.
 - I use that label for convenience; ***I have absolutely no interest in 'what Keynes really meant'.***"
 - (Solow 2004)
- Is there hope for a reformation?
 - Not from within
 - 130 years of hegemony
 - 130 years of protest
 - Still dominant; still wears mantle "rational"
- What about "Heathens at the Gate?"

- Econophysicists
 - Previous critics non-mathematical
 - Problem not mathematics per se but unreality
 - Enter the ultimate realists: Physicists
 - Some qualms about development, but
 - Formidable mathematical foes & staunch critics:
 - "There is little or nothing in existing micro- or macroeconomics texts that is of value for understanding real markets...
 - What is now taught as standard economic theory will eventually disappear, no trace of it will remain in the universities or boardrooms because it simply doesn't work [42,43]: were it engineering, the bridge would collapse." (McCauley)
 - "current economics and finance students typically do not know enough mathematics to understand (a) what what econophysicists are doing, or (b) to evaluate the neo-classical model critically.
 - I therefore suggest that the economists revise their curriculum and require that the following topics be taught: calculus through the advanced level, ordinary differential equations (including advanced) and partial differential equations (including Green functions), classical mechanics through modern nonlinear dynamics, statistical physics, stochastic processes (including solving Smoluchowski-Fokker-Planck equations), computer programming (C, Pascal, etc.) and, for complexity, cell biology.
 - Time for such classes can be obtained in part by eliminating micro- and macro-economics classes from the curriculum.
 - The students will then face a much harder curriculum, and those who survive will come out ahead.
 - So might society as a whole."
 - » (McCauley 2006)

- Finance
 - Capital Asset Pricing Model
 - Risk vs return tradeoff
 - "In order to derive conditions for equilibrium in the capital market we invoke two assumptions.
 - First, we assume a common pure rate of interest, with all investors able to borrow or lend funds on equal terms.
 - Second, we assume homogeneity of investor expectations:
 - investors are assumed to agree on the prospects of various investments...
 - "Needless to say, these are highly restrictive and undoubtedly unrealistic assumptions.
 - However, ... it is far from clear that this formulation should be rejected." (Sharpe 1964)
 - *"The consequence ... are likely to be disastrous in terms of the usefulness of the resulting theory... The capital market line no longer exists..."*
 - *Moreover, there is no single optimal combination of risky securities...*
 - The demise of the capital market line is followed immediately by that of the security market line.
 - *"The theory is in a shambles."* (Sharpe 1970)
- Defence: measure theory by empirical success
 - Conned 40 years of students,
 - But not the data:

- Fama & French
 - "The first assumption is *complete agreement* ...
 - investors agree on the distribution of asset returns...
 - **And this distribution is the true one**
 - The second assumption is that there is *borrowing and lending at a risk free rate*, which is the same for all investors and does not depend on the amount borrowed or lent."
 - "The efficiency of the market portfolio is based on many unrealistic assumptions..."
 - The attraction of the CAPM is that it offers powerful and intuitively pleasing predictions about how to measure risk and the relation between expected return and risk.
 - Unfortunately, the empirical record of the model is poor-poor enough to invalidate the way it is used in applications...
 - The CAPM ... is nevertheless a theoretical tour de force.
 - We continue to teach the CAPM as an introduction to the fundamental concepts of portfolio theory and asset pricing
 - But we also warn students that despite its seductive simplicity, the CAPM's empirical problems probably invalidate its use in applications..."